

[First Hit](#)   [Fwd Refs](#)   [Previous Doc](#)   [Next Doc](#)   [Go to Doc#](#)



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Print

L5: Entry 2 of 30

File: USPT

Feb 3, 2004

US-PAT-NO: 6685927

DOCUMENT-IDENTIFIER: US 6685927 B2

TITLE: Topical application of chromophores for hair removal

DATE-ISSUED: February 3, 2004

## INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Sumian; Chryslain	Jena			DE
Neuberger; Wolfgang	Labuan			MY
Mordon; Serge	Villeneuve d'Ascq			FR

## ASSIGNEE-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY	TYPE CODE
CeramOptec Industries, Inc.	East Longmeadow	MA			02

APPL-NO: 09/ 965354   [\[PALM\]](#)

DATE FILED: September 27, 2001

INT-CL: [07] [A61 K 7/15](#), [A61 K 7/155](#)

US-CL-ISSUED: 424/73; 606/9

US-CL-CURRENT: [424/73](#); [606/9](#)

FIELD-OF-SEARCH: 424/73

PRIOR-ART-DISCLOSED:

## U.S. PATENT DOCUMENTS

Search Selected

Search All

Clear

	PAT-NO	ISSUE-DATE	PATENTEE-NAME	US-CL
<input type="checkbox"/>	<a href="#">4654300</a>	March 1987	Zuk et al.	435/7
<input type="checkbox"/>	<a href="#">5292512</a>	March 1994	Schaefer et al.	
<input type="checkbox"/>	<a href="#">5425728</a>	June 1995	Tankovich	
<input type="checkbox"/>	<a href="#">5529914</a>	June 1996	Hubbell et al.	435/182
<input type="checkbox"/>	<a href="#">5725847</a>	March 1998	De La Mettrie et al.	424/70.1
<input type="checkbox"/>	<a href="#">6074385</a>	June 2000	Klopotek	
<input type="checkbox"/>	<a href="#">6287549</a>	September 2001	Sumian et al.	

## OTHER PUBLICATIONS

Rolland A et al, "Site-Specific Drug Delivery to Pilosebaceous Structures Using Polymeric Microspheres", Pharmaceutical Research 10, 1738-1744 (1993).  
Sumian C et al, "A new method to improve penetration depth of dyes into the follicular duct: Potential application for laser hair removal", Journal of American Academy of Dermatology 41, 172-175 (Aug. 99).

ART-UNIT: 1615

PRIMARY-EXAMINER: Spear; James M.

ATTY-AGENT-FIRM: BJ Associates Skutnik; Bolesh J. Ryan; Thomas J.

## ABSTRACT:

A device and method is disclosed for permanent or semi-permanent removal of hair through the activation of microparticles introduced into hair follicles. Microparticles are incorporated into a composition that is topically applied to the skin. These microparticles containing or consisting of chromophores or chemically activated molecules are of a variety of shapes and sizes. Microparticles are within a size range of 1 micron to 70 microns, and preferably between 10 and 50 microns. Microparticles of this size and variety of shapes enter hair follicles on all areas of the skin without entering other areas of the skin, such as the stratum corneum or sweat gland channels. Treatment of the skin with electromagnetic radiation, ultrasonic radiation or chemical means activates the chromophore or chemically activated compounds, thus destroying the hair follicle without damaging other areas of the skin. In another embodiment, microparticles further contain nanoparticles released further into the hair follicle by use of a solvent or other method, allowing chromophores or chemically activated molecules to penetrate deeper into the follicle and avoid structures such as the sebaceous gland.

19 Claims, 1 Drawing figures

[Previous Doc](#)    [Next Doc](#)    [Go to Doc#](#)

[First Hit](#) [Fwd Refs](#)[Previous Doc](#)[Next Doc](#)[Go to Doc#](#)

Generate Collection

[Print](#)

L5: Entry 5 of 30

File: USPT

Aug 12, 2003

DOCUMENT-IDENTIFIER: US 6605080 B1

TITLE: Method and apparatus for the selective targeting of lipid-rich tissues

Brief Summary Text (6):

In addition, a major problem for teenagers and others is acne which originates at least in part from obstruction of outflow from a sebaceous gland. Certain drug treatments for acne operate through a mechanism of decreasing sebaceous gland output. Destruction, removal, or unblocking of the sebaceous gland, which gland contains lipid-rich tissue, in a non-invasive manner are therefore desirable alternatives for treatment or prevention of acne.

Brief Summary Text (7):

Another related problem is the removal of unwanted hair, and in particular the long-term or permanent removal of such hair by the damage or destruction of the hair follicle. Many techniques have been employed over the years for this treatment, including electrolysis, waxing and treatments with various forms of radiation, including light. However, electrolysis is slow and both electrolysis and waxing are painful to the patient and seldom permanent. Various radiation treatments, particularly those involving light, work more effectively for patients having darker hair than for patients with light hair and various proposals have been made over the years to add a chromophore in some way to the follicle to facilitate such treatments. The use of such artificial chromophores has not heretofore been particularly successful.

Brief Summary Text (15):

While the sebaceous gland may be heated to destroy the gland as part of an acne treatment, the sebaceous gland may also be heated to cause destruction of adjacent areas of a hair follicle, for example the stem cells of the hair follicle as a treatment to achieve hair removal and impede regrowth. Radiation in the indicated wavelengths may also be applied selectively to cells having lipid-rich membranes to porate the membranes to for example permit selective drug delivery to the cells or for other purposes for lipid-rich cells or tissue may be otherwise targeted and heated for affecting some other therapeutic function. Since the radiation fluence, pulse duration, wavelength and other factors may be carefully controlled, and the area to which the radiation is directed may also be controlled, selective lipid-rich cells may be non-invasively targeted to achieve the above and other therapeutic affects.

Detailed Description Text (44):

It is also known that the membranes walls of many cells are composed substantially of lipid and that these membranes differ somewhat from cell to cell. Radiation at one of the wavelengths indicated above may therefore be effective to selectively porate cells, the selectivity being achieved either as a result of controlling the focusing of the radiation to a targeted region and/or certain of the cells in the region porating at lower fluence or less time of radiation application than others as a result of cell size, wall thickness and/or other factors. Poration may be done for example to permit a drug or other therapeutic agent to enter the cell for healing or destruction thereof, for example, for the destruction of cancer cells, or to permit the content of the cell to flow out for various purposes. The poration may be temporary, or may be permanent resulting in cell destruction.

[Previous Doc](#)

[Next Doc](#)

[Go to Doc#](#)

[First Hit](#) [Fwd Refs](#)[Previous Doc](#)[Next Doc](#)[Go to Doc#](#)

Generate Collection

Print

L5: Entry 19 of 30

File: USPT

Feb 6, 2001

DOCUMENT-IDENTIFIER: US 6183773 B1

TITLE: Targeting of sebaceous follicles as a treatment of sebaceous gland disorders

Brief Summary Text (2):

Skin disorders, such as acne, can be irritating and embarrassing. The major disease of skin associated with sebaceous follicles, is acne vulgaris. This is also the most common reason for visiting a dermatologist in the United States. There are many treatments, but no cures for acne. These include antibiotics (which inhibit growth of p. acnes bacteria which play a role in acne), retinoids such as Accutane.RTM. (isotétinoin, which reduces sebaceous gland output of sebum), and antimicrobials such as benzoyl peroxide. Acne lesions result from the rupture of a sebaceous follicle, followed by inflammation and pus (a "whitehead"), or by accumulation of plugged material in the sebaceous follicle (a "blackhead"). This pathophysiology has two major requirements: (1) plugging of the upper portion of the follicle, and (2) an increase in sebum production. The upper portion of the follicle, i.e., the "pore" into which sebum is secreted and which is directly in communication with the skin surface, is called the infundibulum. A plug forms in the infundibulum from cells, sebum, bacteria, and other debris. The sebaceous gland continues to produce sebum (an oily fluid), stretching the infundibulum until either it or some lower portion of the follicles ruptures.

Detailed Description Text (7):

Sebaceous glands are components of the pilosebaceous unit. They are located throughout the body, especially on the face and upper trunk, and produce sebum, a lipid-rich secretion that coats the hair and the epidermal surface. Sebaceous glands are involved in the pathogenesis of several diseases, the most frequent one being acne vulgaris. Acne is a multifactorial disease characterized by the occlusion of follicles by plugs made out of abnormally shed keratinocytes of the infundibulum (upper portion of the hair follicle) in the setting of excess sebum production by hyperactive sebaceous glands. Various treatment modalities for acne exist that aim in modifying the rate of sebum secretion by the sebaceous glands (e.g., retinoids), inhibiting the bacterial overgrowth in the follicular duct (antibiotics), or decreasing the inflammation of acne lesions (anti-inflammatory agents). Most of these agents are not curative of acne and simply control the disease by affecting one of the aforementioned pathogenic factors. Oral retinoids are a notable exception: they are potent drugs that can achieve a significant cure rate for acne, but their side effect profile often limits their use. Advantages of the present invention include that treatment can permanently alter the pilosebaceous unit, rendering it no longer susceptible to pore pluggage without the side effects associated with oral retinoids.

Detailed Description Text (56):

In order to assure removal of plug 26, modification of pore opening 22, modification of the infundibulum 24, and/or modification of the sebaceous gland 20, use of a light source, e.g., a laser, having sufficient energy and depth of penetration is required. FIG. 3 demonstrates how an operator (not shown) will position the energy source 30, e.g., a laser, over a hair follicle 16 such that an optimum location for aiming the light pulse to strike the energy activatable material 28 about the plug 26, sebaceous gland 20, infundibulum 24 and/or pore opening 22 is obtained. The energy source 30 can be moved across the skin surface

in any direction 32 by the operator, thereby effectively irradiating multiple follicles 16 multiple times. The process can be repeated until the desired effect (s) are achieved.

[Previous Doc](#)[Next Doc](#)[Go to Doc#](#)

[First Hit](#) [Fwd Refs](#)[Previous Doc](#)[Next Doc](#)[Go to Doc#](#)

Generate Collection

Print

L5: Entry 23 of 30

File: USPT

Jul 18, 2000

DOCUMENT-IDENTIFIER: US 6090788 A

**\*\* See image for Certificate of Correction \*\***

TITLE: Phototherapy based method for treating pathogens and composition for effecting same

Brief Summary Text (89):

Oral therapy: The two oral antifungal drugs that have traditionally comprised the mainstay of the treatment of onychomycosis are griseofulvin and ketoconazole. These two oral anti fungal agents have been used for the treatment of onychomycosis for almost half a century. One of the major limitations of treatment with either griseofulvin or ketoconazole is the long duration of therapy required. In addition, the clinical and mycological cure rates are low, and there is a greater than 75% probability that the patient will relapse within two years. The potential for significant side effects is another problem, particularly with ketoconazole.

Brief Summary Text (92):

When orally administering any of these drugs, liver function monitoring becomes essential [Gupta et al. (1994) Continuing Medical Education Antifungal Agents: An Overview. Part II, 30:911-33].

Brief Summary Text (93):

Properties of an "ideal" oral antifungal agent most suitable for the treatment of onychomycosis would include favorable nail kinetics, good incorporation into the nail matrix, adequate diffusion through the nail bed, high clinical cure rate, high mycological cure rate, low incidence of relapse, effective when used for short-term therapy, low incidence of side effects, fewer drug interactions with other drugs or food, etc., and cost effectiveness.

Brief Summary Text (94):

Unfortunately, none of the oral anti fungal agents, neither the traditional nor the new generation drugs is ideal because of the potential for significant side effects, drug interaction, high incidence of relapse, long term therapy and high cost.

Brief Summary Text (97):

U.S. Pat. Nos. 5,226,907 and 5,425,728 to Tankovich discloses a device and process for the permanent removal of unwanted human hair. Hair is contaminated with a substance which strongly absorbs a specific wavelength of light. The skin is then illuminated by a laser producing light at the specified wavelength and at a sufficient intensity and duration to kill the follicles or the skin tissue feeding the hair. There is however no discussion of pathogens treatment using laser technology.

Brief Summary Text (114):

According to still further features in the described preferred embodiments the pigment is conjugated to an immunoglobulin or a drug which can specifically bind the pathogen.

Brief Summary Text (115):

According to still further features in the described preferred embodiments the

light absorbing material is selected from the group of consisting of lacquer dye, hair dye, India ink, scarlet red, D & C red dyes, toluidine blue, microcyanine, hematoporphyrin derivatives, photophrin II, chlorophyll derivatives, chlorin-E6, black ink, lycopene, carotenoids, 5-aminolaevulic acid, benzoporphyrin derivative monoacid, tetra (m-hydroxyphenyl) chlorin, N-aspartyl chlorine-E6, tinetiopurin, anti-malarials, phenothiazines, clofazimine, minocycline, zinc phthalocyanine derivatives, a combination of photo dynamic therapy with bio-reductive drugs, carotene, lycopene, riboflavin, silver, gold, mercury, bismuth, iron, zinc, copper, picric acid, dinitrophenol, iron salts, pararosaniline chloride, acid fast stains, phenol red, carbol fuchsin, H.sub.2 SO.sub.4, methylene blue, bromocresol, brilliant green, ascospore stain, bromocresol purple, calcofour stain, Evans blue, Giemza stain, Tween 80, gomori methenamine silver stain, gram stain including hucker modification, loctophenol cotton blue, loctophenol cotton blue with polyvinyl alcohol (PVA), bromthymol blue, eosin gentian violet, thiopyronin, phthalocyanine and chloraluminicin.

Detailed Description Text (16):

In addition, there are drugs which are used to treat various non-related conditions which are known to induce nail pigmentation as a side effect. One example are the anti-malarial drugs chloroquine (aralene), quincrine and amodiaquine, which induce a blue-brown nail pigmentation, due to melanin-antimalarial drug complexes deposition in the nail bed and plate. Another example is minocycline used to treat acne vulgaris which induce a blue nail pigmentation due to iron-drug complexes deposition. Other examples are listed in Fitz Patrick et al. (1993) Dermatology in General Medicine. McGraw-Hill, N.Y., p. 704. Such a drug may therefore serve as a carrier for the pigment to reach specifically to the nail. However, the phenomenon of drug associated nail pigmentation may serve per se for providing a light absorbing substance according to the invention.

Detailed Description Text (22):

A pigment incapable of specifically binding the pathogen may be made specific by having it conjugated to an immunoglobulin or drug which is specific to that pathogen. Anti-Trichophyton sp., anti-Candida sp., anti Aspergillaceae sp. mono- and polyclonal antibodies are available from Ecopath Aspergillus, Institute Pasteur, Genk, Belgium. Antibodies specific for other pathogens are also available. If the pathogen corresponding to the antibody applied is present, it will be labeled, and rendered pigmented by, for example, direct immunofluorescence, immunoperoxidase reaction, or avidin-biotin complex formation methods, as well known in the art.

Detailed Description Text (23):

One ordinarily skilled in the art would know how to conjugate various pigments to various immunoglobulins and/or drugs without affecting the specific binding capabilities of the latter and the pigment characteristics of the former.

Detailed Description Text (24):

Thus, according to the present invention the pigment may be a dye, a drug or any substance which absorbs light at a desired wavelength.

Detailed Description Text (27):

Examples of drugs which can be used include 5-aminolaevulic acid (ALA), benzoporphyrin derivative monoacid, tetra (m-hydroxyphenyl) chlorine, N-aspartyl chlorine-E6, tinetiopurin, anti-malarials, phenothiazines, clofazimine, minocycline (tetracycline), zinc phthalocyanine derivatives and a combination of photo dynamic therapy (PDT) with various bio-reductive drugs.

Detailed Description Text (38):

Active transdermal delivery is well known in the art. Few strategies are employed for transdermal active drug delivery via active pads.



Detailed Description Text (42):

Further details concerning the functionality and precise construction of active pads are well known in the art. Such details are found, for example, in "Breaking the skin barrier" (1996) by Ingrid Wickelgren, Popular Science, December, pp. 86-89; "Controlled drug delivery fundamentals and applications" Second edition (1987) J. R. Robinson and V. H. L. Lee editors, Marceldekker Inc. New York, and U.S. Pat. Nos. 5,169,384; 4,763,660; 5,443,441 and 3,447,537, all are incorporated by reference as if fully set forth herein.

Detailed Description Text (66):

After having treated the affected area of skin, the patient is recommended to avoid sun exposure for about a month, as well as to use sun blockers to prevent inflammation. The patient is also recommended to use a topical antibiotic ointment, gel, or cream. For local irritation, the use of steroids, topical or systemic anti-histamine, or other contra-irritant agents (e.g. Aloe vera) is recommended.

## CLAIMS:

12. The method of claim 11, wherein said pigment is conjugated to an immunoglobulin or a drug which can specifically bind the fungal pathogen.

13. The method of claim 1, wherein said light absorbing material is selected from the group of consisting of lacquer dye, hair dye, India ink, scarlet red, D & C red dyes, toluidine blue, microcyanine, hematoporphyrin derivatives, photophrin II, chlorophyll derivatives, chlorin-E6, black ink, lycopene, carotenoids, 5-aminolaevulinic acid, benzoporphyrin derivative monoacid, tetra (m-hydroxyphenyl) chlorin, N-aspartyl chlorine-E6, tinetiopurin, anti-malarials, phenothiazines, clofazimine, minocycline, zinc phthalocyanine derivatives, a combination of photodynamic therapy with bio-reductive drugs, carotene, lycopene, riboflavin, silver, gold, mercury, bismuth, iron, zinc, copper, picric acid, dinitrophenol, iron salts, pararosaniline chloride, acid fast stains, phenol red, carbol fuchsin, H.sub.2 SO.sub.4, methylene blue, bromocresol, brilliant green, ascospore stain, bromocresol purple, calcofour stain, Evans blue, Giemza stain, Tween 80, gomori methenamine silver stain, gram stain including hucker modification, loctophenol cotton blue, loctophenol cotton blue with polyvinyl alcohol (PVA), bromthymol blue, eosin, gentian violet, thiopyronin, phthalocyanine and chloraluminicin.

[Previous Doc](#)[Next Doc](#)[Go to Doc#](#)

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Clear

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Print

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☐ 1. Document ID: US 6866659 B2

L5: Entry 1 of 30

File: USPT

Mar 15, 2005

US-PAT-NO: 6866659

DOCUMENT-IDENTIFIER: US 6866659 B2

TITLE: Method to enhance optical transparency of biological tissues

DATE-ISSUED: March 15, 2005

## INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Nemati; Babak	Lawrenceville	NJ	08876	

US-CL-CURRENT: 604/500; 604/521

Full	Title	Citation	Front	Review	Classification	Date	Reference			Claims	KMC	Draw. D.
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☐ 2. Document ID: US 6685927 B2

L5: Entry 2 of 30

File: USPT

Feb 3, 2004

US-PAT-NO: 6685927

DOCUMENT-IDENTIFIER: US 6685927 B2

TITLE: Topical application of chromophores for hair removal

DATE-ISSUED: February 3, 2004

## INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Sumian; Chryslain	Jena			DE
Neuberger; Wolfgang	Labuan			MY
Mordon; Serge	Villeneuve d'Ascq			FR

US-CL-CURRENT: 424/73; 606/9

Full	Title	Citation	Front	Review	Classification	Date	Reference			Claims	KMC	Draw. D.
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☐ 3. Document ID: US 6676655 B2

L5: Entry 3 of 30

File: USPT

Jan 13, 2004

US-PAT-NO: 6676655

DOCUMENT-IDENTIFIER: US 6676655 B2

TITLE: Low intensity light therapy for the manipulation of fibroblast, and fibroblast-derived mammalian cells and collagen

DATE-ISSUED: January 13, 2004

## INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
McDaniel; David H.	Virginia Beach	VA		

US-CL-CURRENT: 606/9; 606/3, 606/8, 607/88, 607/90, 607/91

Full	Title	Citation	Front	Review	Classification	Date	Reference			Claims	NAME	Draw D
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☐ 4. Document ID: US 6629971 B2

L5: Entry 4 of 30

File: USPT

Oct 7, 2003

US-PAT-NO: 6629971

DOCUMENT-IDENTIFIER: US 6629971 B2

TITLE: Process for stimulating hair growth

DATE-ISSUED: October 7, 2003

## INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
McDaniel; David	Virginia Beach	VA	23452	

US-CL-CURRENT: 606/9; 128/898, 606/127, 606/131, 606/32, 607/101, 607/88, 607/98

Full	Title	Citation	Front	Review	Classification	Date	Reference			Claims	NAME	Draw D
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☐ 5. Document ID: US 6605080 B1

L5: Entry 5 of 30

File: USPT

Aug 12, 2003

US-PAT-NO: 6605080

DOCUMENT-IDENTIFIER: US 6605080 B1

TITLE: Method and apparatus for the selective targeting of lipid-rich tissues

DATE-ISSUED: August 12, 2003

## INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Altshuler; Gregory B.	Wilmington	MA		
Anderson; R. Rox	Lexington	MA		
Manstein; Dieter	Boston	MA		

US-CL-CURRENT: 606/3; 606/13, 606/89

Full	Title	Citation	Front	Review	Classification	Date	Reference			Claims	KWIC	Draw. D.
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☐ 6. Document ID: US 6600951 B1

L5: Entry 6 of 30

File: USPT

Jul 29, 2003

US-PAT-NO: 6600951

DOCUMENT-IDENTIFIER: US 6600951 B1

TITLE: Targeting of sebaceous follicles as a Treatment of sebaceous gland disorders

DATE-ISSUED: July 29, 2003

## INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Anderson; Richard Rox	Lexington	MA		

US-CL-CURRENT: 604/20; 604/289, 604/501, 606/9

Full	Title	Citation	Front	Review	Classification	Date	Reference			Claims	KWIC	Draw. D.
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☐ 7. Document ID: US 6553254 B1

L5: Entry 7 of 30

File: USPT

Apr 22, 2003

US-PAT-NO: 6553254

DOCUMENT-IDENTIFIER: US 6553254 B1

TITLE: Combination of non-living-source physical energy and living-source chemical energy to maximize the salvage of ATP

DATE-ISSUED: April 22, 2003

## INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Kenyon; Keith E.	Van Nuys	CA	91401	

US-CL-CURRENT: 604/20; 514/23, 606/27

Full	Title	Citation	Front	Review	Classification	Date	Reference			Claims	KWIC	Draw. D.
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☐ 8. Document ID: US 6514244 B2

L5: Entry 8 of 30

File: USPT

Feb 4, 2003

US-PAT-NO: 6514244

DOCUMENT-IDENTIFIER: US 6514244 B2

TITLE: Dynamic cooling of tissue for radiation treatment

DATE-ISSUED: February 4, 2003

## INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Pope; Karl	Belmont	MA		
Durkin; Anthony J.	Watertown	MA		
Hsia; James C.	Weston	MA		

US-CL-CURRENT: 606/9; 606/11, 606/2, 606/20, 606/23

Full	Title	Citation	Front	Review	Classification	Date	Reference				Claims	RMK	Draw D
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☐ 9. Document ID: US 6479533 B1

L5: Entry 9 of 30

File: USPT

Nov 12, 2002

US-PAT-NO: 6479533

DOCUMENT-IDENTIFIER: US 6479533 B1

TITLE: Methods and compositions for the protection of mitochondria

DATE-ISSUED: November 12, 2002

## INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Yarosh; Daniel B.	Merrick	NY		

US-CL-CURRENT: 514/398; 424/9.1

Full	Title	Citation	Front	Review	Classification	Date	Reference				Claims	RMK	Draw D
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☐ 10. Document ID: US 6443945 B1

L5: Entry 10 of 30

File: USPT

Sep 3, 2002

US-PAT-NO: 6443945

DOCUMENT-IDENTIFIER: US 6443945 B1

**\*\* See image for Certificate of Correction \*\***

TITLE: Laser assisted pharmaceutical delivery and fluid removal

DATE-ISSUED: September 3, 2002

## INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Marchitto; Kevin S.	Little Rock	AR		
Flock; Stephen T.	Little Rock	AR		

US-CL-CURRENT: 606/7; 128/897, 606/10, 607/89

Full	Title	Citation	Front	Review	Classification	Date	Reference			Claims	KWIC	Draw De
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☐ 11. Document ID: US 6425891 B1

L5: Entry 11 of 30

File: USPT

Jul 30, 2002

US-PAT-NO: 6425891

DOCUMENT-IDENTIFIER: US 6425891 B1

TITLE: Hair removal system

DATE-ISSUED: July 30, 2002

## INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Tapper; Robert	Los Angeles	CA	90025	

US-CL-CURRENT: 604/501; 604/20

Full	Title	Citation	Front	Review	Classification	Date	Reference			Claims	KWIC	Draw De
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☐ 12. Document ID: US 6358242 B1

L5: Entry 12 of 30

File: USPT

Mar 19, 2002

US-PAT-NO: 6358242

DOCUMENT-IDENTIFIER: US 6358242 B1

TITLE: Post laser treatment for permanent hair removal

DATE-ISSUED: March 19, 2002

## INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Cecchetti; Walter	Saonara			IT

US-CL-CURRENT: 606/9; 128/898, 606/131, 606/133, 607/88, 607/89

Full	Title	Citation	Front	Review	Classification	Date	Reference			Claims	KWIC	Draw De
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☐ 13. Document ID: US 6315772 B1

L5: Entry 13 of 30

File: USPT

Nov 13, 2001

US-PAT-NO: 6315772

DOCUMENT-IDENTIFIER: US 6315772 B1

**\*\* See image for Certificate of Correction \*\***

TITLE: Laser assisted pharmaceutical delivery and fluid removal

DATE-ISSUED: November 13, 2001

## INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Marchitto; Kevin S.	Little Rock	AR		
Flock; Stephen T.	Little Rock	AR		

US-CL-CURRENT: 606/9; 604/21, 606/10, 606/17, 606/3, 607/88

Full	Title	Citation	Front	Review	Classification	Date	Reference			Claims	KIMC	Draw Ds
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☐ 14. Document ID: US 6283956 B1

L5: Entry 14 of 30

File: USPT

Sep 4, 2001

US-PAT-NO: 6283956

DOCUMENT-IDENTIFIER: US 6283956 B1

TITLE: Reduction, elimination, or stimulation of hair growth

DATE-ISSUED: September 4, 2001

## INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
McDaniel; David H.	Virginia Beach	VA		

US-CL-CURRENT: 606/9; 606/127, 606/133, 606/2, 607/88, 607/89, 607/91

Full	Title	Citation	Front	Review	Classification	Date	Reference			Claims	KIMC	Draw Ds
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☐ 15. Document ID: US 6254596 B1

L5: Entry 15 of 30

File: USPT

Jul 3, 2001

US-PAT-NO: 6254596

DOCUMENT-IDENTIFIER: US 6254596 B1

TITLE: Solid state source for generating intense light for photomedicine

DATE-ISSUED: July 3, 2001

## INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Lawandy; Nabil M.	Providence	RI		

US-CL-CURRENT: 606/9; 372/22, 606/3

Full	Title	Citation	Front	Review	Classification	Date	Reference			Claims	KWIC	Draw D
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☐ 16. Document ID: US 6251100 B1

L5: Entry 16 of 30

File: USPT

Jun 26, 2001

US-PAT-NO: 6251100

DOCUMENT-IDENTIFIER: US 6251100 B1

**\*\* See image for Certificate of Correction \*\***

TITLE: Laser assisted topical anesthetic permeation

DATE-ISSUED: June 26, 2001

## INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Flock; Stephen T.	Edmonton			CA
Marchitto; Kevin S.	Villa Park	IL		
Vestal; Charles H.	Little Rock	AR		
Lehman; Paul A.	Escondido	CA		

US-CL-CURRENT: 606/2; 604/20, 606/3, 606/9, 607/88

Full	Title	Citation	Front	Review	Classification	Date	Reference			Claims	KWIC	Draw D
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☐ 17. Document ID: US 6219575 B1

L5: Entry 17 of 30

File: USPT

Apr 17, 2001

US-PAT-NO: 6219575

DOCUMENT-IDENTIFIER: US 6219575 B1

TITLE: Method and apparatus to enhance optical transparency of biological tissues

DATE-ISSUED: April 17, 2001

## INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Nemati; Babak	Lawrenceville	NJ	08876	

US-CL-CURRENT: 604/20; 128/898, 604/500

Full	Title	Citation	Front	Review	Classification	Date	Reference			Claims	KWIC	Draw D
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☐ 18. Document ID: US 6206869 B1

L5: Entry 18 of 30

File: USPT

Mar 27, 2001

US-PAT-NO: 6206869

DOCUMENT-IDENTIFIER: US 6206869 B1

**\*\* See image for Certificate of Correction \*\***

TITLE: Hair removal system

DATE-ISSUED: March 27, 2001

## INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Tapper; Robert	Los Angeles	CA	90025	

US-CL-CURRENT: 604/501; 604/20, 606/43

Full	Title	Citation	Front	Review	Classification	Date	Reference			Claims	KNOC	Draw Ds
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☐ 19. Document ID: US 6183773 B1

L5: Entry 19 of 30

File: USPT

Feb 6, 2001

US-PAT-NO: 6183773

DOCUMENT-IDENTIFIER: US 6183773 B1

TITLE: Targeting of sebaceous follicles as a treatment of sebaceous gland disorders

DATE-ISSUED: February 6, 2001

## INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Anderson; Richard Rox	Lexington	MA		

US-CL-CURRENT: 424/450; 424/401, 424/70.1, 424/70.8

Full	Title	Citation	Front	Review	Classification	Date	Reference			Claims	KNOC	Draw Ds
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☐ 20. Document ID: US 6168590 B1

L5: Entry 20 of 30

File: USPT

Jan 2, 2001

US-PAT-NO: 6168590

DOCUMENT-IDENTIFIER: US 6168590 B1

TITLE: Method for permanent hair removal

DATE-ISSUED: January 2, 2001

## INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Neev; Joseph	Laguna Beach	CA		

US-CL-CURRENT: 606/9; 606/43

Full	Title	Citation	Front	Review	Classification	Date	Reference			Claims	KAMC	Draw D.
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☐ 21. Document ID: US 6162211 A

L5: Entry 21 of 30

File: USPT

Dec 19, 2000

US-PAT-NO: 6162211

DOCUMENT-IDENTIFIER: US 6162211 A

TITLE: Skin enhancement using laser light

DATE-ISSUED: December 19, 2000

## INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Tankovich; Nikolai I.	San Diego	CA		
Dasse; Kurt A.	Needham	MA		
Fairchild; Paul W.	San Diego	CA		
Zhao; Zhong- Quan	San Diego	CA		
Kolinko; Vladimir G.	San Diego	CA		

US-CL-CURRENT: 606/9; 607/89

Full	Title	Citation	Front	Review	Classification	Date	Reference			Claims	KAMC	Draw D.
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☐ 22. Document ID: US 6094594 A

L5: Entry 22 of 30

File: USPT

Jul 25, 2000

US-PAT-NO: 6094594

DOCUMENT-IDENTIFIER: US 6094594 A

TITLE: Hair removal system

DATE-ISSUED: July 25, 2000

## INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Tapper; Robert	Los Angeles	CA	90025	

US-CL-CURRENT: 604/20; 604/290, 606/131, 606/43, 8/161

Full	Title	Citation	Front	Review	Classification	Date	Reference			Claims	KAMC	Draw D.
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☐ 23. Document ID: US 6090788 A

L5: Entry 23 of 30

File: USPT

Jul 18, 2000

US-PAT-NO: 6090788

DOCUMENT-IDENTIFIER: US 6090788 A

**\*\* See image for Certificate of Correction \*\***

TITLE: Phototherapy based method for treating pathogens and composition for effecting same

DATE-ISSUED: July 18, 2000

## INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Lurie; Raz	Tel Aviv			IL

US-CL-CURRENT: 514/23; 427/595, 427/596, 606/2, 606/3

Full	Title	Citation	Front	Review	Classification	Date	Reference			Claims	KWNC	Drawn De
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☐ 24. Document ID: US 6059777 A

L5: Entry 24 of 30

File: USPT

May 9, 2000

US-PAT-NO: 6059777

DOCUMENT-IDENTIFIER: US 6059777 A

TITLE: Method and process for non-invasive sub-epidermal permanent hair removal

DATE-ISSUED: May 9, 2000

## INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Acquaire; Florence	Oakland	NJ	07436	

US-CL-CURRENT: 606/13

Full	Title	Citation	Front	Review	Classification	Date	Reference			Claims	KWNC	Drawn De
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☐ 25. Document ID: US 6050990 A

L5: Entry 25 of 30

File: USPT

Apr 18, 2000

US-PAT-NO: 6050990

DOCUMENT-IDENTIFIER: US 6050990 A

TITLE: Methods and devices for inhibiting hair growth and related skin treatments

DATE-ISSUED: April 18, 2000

## INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Tankovich; Nikolai I.	San Diego	CA		
Dasse; Kurt A.	Needham	MA		
Fine; David H.	Lincoln	MA		
Fairchild; Paul W.	San Diego	CA		
Zhao; Zhong-Quan	San Diego	CA		
Lefebvre; Mike	San Diego	CA		
Lee, Jr.; John	Ridgefield	CT		
Rolfe; Jonathan L.	North Easton	MA		
Murrell; Susan	River Edge	NJ		
Hunter, II; Allen	San Diego	CA		
Reynolds; Amanda J	Richmond			GB
Kolinko; Vladimir G.	San Diego	CA		

US-CL-CURRENT: 606/9; 606/16

Full	Title	Citation	Front	Review	Classification	Date	Reference			Claims	KWIC	Draw D
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☐ 26. Document ID: US 5853407 A

L5: Entry 26 of 30

File: USPT

Dec 29, 1998

US-PAT-NO: 5853407

DOCUMENT-IDENTIFIER: US 5853407 A

TITLE: Method and apparatus for hair removal

DATE-ISSUED: December 29, 1998

## INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Miller; Iain D.	Charlestown	MA		

US-CL-CURRENT: 606/9

Full	Title	Citation	Front	Review	Classification	Date	Reference			Claims	KWIC	Draw D
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☐ 27. Document ID: US 5735844 A

L5: Entry 27 of 30

File: USPT

Apr 7, 1998

US-PAT-NO: 5735844

DOCUMENT-IDENTIFIER: US 5735844 A

TITLE: Hair removal using optical pulses

DATE-ISSUED: April 7, 1998

## INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Anderson; R. Rox	Lexington	MA		
Grossman; Melanie	Boston	MA		
Farinelli; William	Danvers	MA		

US-CL-CURRENT: 606/9

Full	Title	Citation	Front	Review	Classification	Date	Reference			Claims	KWNC	Draw D
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☐ 28. Document ID: US 5632741 A

L5: Entry 28 of 30

File: USPT

May 27, 1997

US-PAT-NO: 5632741

DOCUMENT-IDENTIFIER: US 5632741 A

TITLE: Epilation system

DATE-ISSUED: May 27, 1997

## INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Zavislan; James M.	Pittsford	NY		
Tomson, deceased; Steven H.	late of Cape Elizabeth	ME		

US-CL-CURRENT: 606/9

Full	Title	Citation	Front	Review	Classification	Date	Reference			Claims	KWNC	Draw D
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☐ 29. Document ID: US 5630811 A

L5: Entry 29 of 30

File: USPT

May 20, 1997

US-PAT-NO: 5630811

DOCUMENT-IDENTIFIER: US 5630811 A

TITLE: Method and apparatus for hair removal

DATE-ISSUED: May 20, 1997

## INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Miller; Iain D.	Charlestown	MA	02129	

US-CL-CURRENT: 606/9

Full	Title	Citation	Front	Review	Classification	Date	Reference			Claims	KWNC	Draw D
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☐ 30. Document ID: US 5595568 A

L5: Entry 30 of 30

File: USPT

Jan 21, 1997

US-PAT-NO: 5595568

DOCUMENT-IDENTIFIER: US 5595568 A

TITLE: Permanent hair removal using optical pulses

DATE-ISSUED: January 21, 1997

## INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Anderson; R. Rox	Lexington	MA		
Grossman; Melanie	Boston	MA		
Farinelli; William	Danvers	MA		

US-CL-CURRENT: 606/9

Full	Title	Citation	Front	Review	Classification	Date	Reference			Claims	FIGS	Draw. De
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Terms	Documents
L4 and (drug or antibiotic)	30

Display Format:  [Previous Page](#)[Next Page](#)[Go to Doc#](#)

[First Hit](#) [Fwd Refs](#)[Previous Doc](#)[Next Doc](#)[Go to Doc#](#)

Generate Collection

Print

L7: Entry 6 of 18

File: USPT

Jan 27, 1998

DOCUMENT-IDENTIFIER: US 5711761 A

TITLE: Iontophoretic drug delivery

Detailed Description Text (51):

The iontophoretic device was placed posteriorly on the rabbit, the hair having been clipped and removed with a dipilatory. The device was then attached by means of an adhesive for the duration of the experiment. During the experimental procedure, blood samples were removed from the subject rabbits. Where rabbits were anesthetized, blood samples were removed from their inferior vena cava by means of a catheter inserted into the femoral vein. For the experiments employing constrained (rather than anesthetized) rabbits, blood samples were pulled from the heart by means of a catheter inserted into the marginal vein of the rabbit's ear. The samples thus withdrawn then were analyzed for the drug which was iontophoretically introduced therein.

[Previous Doc](#)[Next Doc](#)[Go to Doc#](#)

[First Hit](#) [Fwd Refs](#)[Previous Doc](#)[Next Doc](#)[Go to Doc#](#)

Generate Collection

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L7: Entry 14 of 18

File: USPT

Apr 8, 1986

DOCUMENT-IDENTIFIER: US 4581148 A

TITLE: Depilating composition and method

Brief Summary Text (30):

One of the major problems encountered in highly alkaline dipilatory compositions has been the swelling of the hair root in the follicle without weakening of the bond between the bulb and the surrounding chemical layer which then interferes with effective removal of the hair shaft using conventional procedures.

[Previous Doc](#)[Next Doc](#)[Go to Doc#](#)



[First Hit](#)   [Fwd Refs](#)   [Previous Doc](#)   [Next Doc](#)   [Go to Doc#](#)



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Print

L7: Entry 14 of 18

File: USPT

Apr 8, 1986

US-PAT-NO: 4581148

DOCUMENT-IDENTIFIER: US 4581148 A

TITLE: Depilating composition and method

DATE-ISSUED: April 8, 1986

## INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Swanson; Harley D.	Denver	CO		
McAninch; Terry L.	Westminster	CO		
Conner; J. Keith	Bellevue	WA		

US-CL-CURRENT: 252/8.57; 8/94.16, 8/94.18

## CLAIMS:

What is claimed is:

1. A composition for dissolving hair comprising:

Approx. Wt. (%)	
Water	87.00-94.00
Sodium Hydroxide	4.00-8.00
Trisodium Phosphate	2.00-3.00
Sodium Gluconate	0.25-1.00
Triethanolamine Dodecyl Benzene	0.10-0.50
Sulfonate	
Sodium Metasilicate	0.10-0.50

2. A composition for dissolving hair comprising:

Approx. Wt. (%)	
Water	89.15
Sodium Hydroxide	7.25
Trisodium Phosphate	2.50
Sodium Gluconate	0.50

Triethanolamine Dodecyl Benzene  
0.30-Sulfonate  
Sodium Metasilicate 0.30

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[Previous Doc](#)[Next Doc](#)[Go to Doc#](#)

## Hit List

Clear

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Generate OACS

### Search Results - Record(s) 1 through 18 of 18 returned.

#### ☐ 1. Document ID: US 6824786 B2

L7: Entry 1 of 18

File: USPT

Nov 30, 2004

US-PAT-NO: 6824786

DOCUMENT-IDENTIFIER: US 6824786 B2

TITLE: Compositions comprising phenyl-glycine derivatives

DATE-ISSUED: November 30, 2004

## INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Yu; Ruey J.	Ambler	PA	19002	
Van Scott; Eugene J.	Abington	PA	19001	

US-CL-CURRENT: 424/401; 514/553, 514/557, 514/567

Full	Title	Citation	Front	Review	Classification	Date	Reference			Claims	KWIC	Draw D
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#### ☐ 2. Document ID: US 6740327 B2

L7: Entry 2 of 18

File: USPT

May 25, 2004

US-PAT-NO: 6740327

DOCUMENT-IDENTIFIER: US 6740327 B2

TITLE: Oligosaccharide aldonic acids and their topical use

DATE-ISSUED: May 25, 2004

## INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Yu; Ruey J.	Ambler	PA	19002	
Van Scott; Eugene J.	Abington	PA	19001	

US-CL-CURRENT: 424/401; 424/400, 514/557

Full	Title	Citation	Front	Review	Classification	Date	Reference			Claims	KWIC	Draw D
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☐ 3. Document ID: US 6335023 B1

L7: Entry 3 of 18

File: USPT

Jan 1, 2002

US-PAT-NO: 6335023

DOCUMENT-IDENTIFIER: US 6335023 B1

TITLE: Oligosaccharide aldonic acids and their topical use

DATE-ISSUED: January 1, 2002

## INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Yu; Ruey J.	Ambler	PA	19002	
Van Scott; Eugene J.	Abington	PA	19001	

US-CL-CURRENT: 424/401; 514/557

Full	Title	Citation	Front	Review	Classification	Date	Reference			Claims	KWAC	Draw. D.
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☐ 4. Document ID: US 6316011 B1

L7: Entry 4 of 18

File: USPT

Nov 13, 2001

US-PAT-NO: 6316011

DOCUMENT-IDENTIFIER: US 6316011 B1

TITLE: End modified thermal responsive hydrogels

DATE-ISSUED: November 13, 2001

## INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Ron; Eyal S.	Lexington	MA		
Bromberg; Lev	Swampscott	MA		
Temchenko; Marina	Swampscott	MA		

US-CL-CURRENT: 424/401; 424/78.02, 424/78.03, 424/78.18

Full	Title	Citation	Front	Review	Classification	Date	Reference			Claims	KWAC	Draw. D.
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☐ 5. Document ID: US 6117915 A

L7: Entry 5 of 18

File: USPT

Sep 12, 2000

US-PAT-NO: 6117915

DOCUMENT-IDENTIFIER: US 6117915 A

**\*\* See image for Certificate of Correction \*\***

TITLE: Fatty alcohol phosphate ester emulsifier compositions

DATE-ISSUED: September 12, 2000

## INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Pereira; Abel G.	Belleville	NJ		
Obukowho; Patrick	Fords	NJ		
Garcia; Manuel Gamez	Flemington	NJ		
King; Nancy	Avis	PA		

US-CL-CURRENT: 516/57; 424/59, 424/70.23, 424/70.9, 514/941

Full	Title	Citation	Front	Review	Classification	Date	Reference			Claims	KWIC	Draw D
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☐ 6. Document ID: US 5711761 A

L7: Entry 6 of 18

File: USPT

Jan 27, 1998

US-PAT-NO: 5711761

DOCUMENT-IDENTIFIER: US 5711761 A

TITLE: Iontophoretic drug delivery

DATE-ISSUED: January 27, 1998

## INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Untereker; Darrel F.	Cedar	MN		
Phipps; Joseph B.	Plymouth	MN		
Lattin; Gary A.	Forest Lake	MN		

US-CL-CURRENT: 604/20

Full	Title	Citation	Front	Review	Classification	Date	Reference			Claims	KWIC	Draw D
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☐ 7. Document ID: US 5573503 A

L7: Entry 7 of 18

File: USPT

Nov 12, 1996

US-PAT-NO: 5573503

DOCUMENT-IDENTIFIER: US 5573503 A

**\*\* See image for Certificate of Correction \*\***

TITLE: Iontophoretic drug delivery

DATE-ISSUED: November 12, 1996

## INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Untereker; Darrel F.	Cedar	MN		
Phipps; Joseph B.	Plymouth	MN		

Lattin; Gary A.

Forest Lake

MN

US-CL-CURRENT: 604/20; 607/149

Full	Title	Citation	Front	Review	Classification	Date	Reference			Claims	KWNC	Draw D
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☐ 8. Document ID: US 5415628 A

L7: Entry 8 of 18

File: USPT

May 16, 1995

US-PAT-NO: 5415628

DOCUMENT-IDENTIFIER: US 5415628 A

TITLE: Iontophorett drug delivery

DATE-ISSUED: May 16, 1995

## INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Untereker; Darrel F.	Cedar	MN		
Phipps; Joseph B.	Plymouth	MN		
Lattin; Gary A.	Forest Lake	MN		

US-CL-CURRENT: 604/20; 607/149

Full	Title	Citation	Front	Review	Classification	Date	Reference			Claims	KWNC	Draw D
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☐ 9. Document ID: US 5135477 A

L7: Entry 9 of 18

File: USPT

Aug 4, 1992

US-PAT-NO: 5135477

DOCUMENT-IDENTIFIER: US 5135477 A

TITLE: Iontophoretic drug delivery

DATE-ISSUED: August 4, 1992

## INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Untereker; Darrel F.	Cedar	MN		
Phipps; Joseph B.	Plymouth	MN		
Lattin; Gary A.	Forest Lake	MN		

US-CL-CURRENT: 604/20; 607/152

Full	Title	Citation	Front	Review	Classification	Date	Reference			Claims	KWNC	Draw D
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☐ 10. Document ID: US 4845845 A

L7: Entry 10 of 18

File: USPT

Jul 11, 1989

US-PAT-NO: 4845845

DOCUMENT-IDENTIFIER: US 4845845 A

TITLE: Plastic shaving device

DATE-ISSUED: July 11, 1989

## INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Scott; Avery	Pontiac	MI	48058	

US-CL-CURRENT: 30/32; 30/172, D24/147, D28/46

Full	Title	Citation	Front	Review	Classification	Date	Reference			Claims	KNIC	Draw D
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☐ 11. Document ID: US 4775530 A

L7: Entry 11 of 18

File: USPT

Oct 4, 1988

US-PAT-NO: 4775530

DOCUMENT-IDENTIFIER: US 4775530 A

TITLE: Method for treatment and prevention of pseudofolliculitis barbae

DATE-ISSUED: October 4, 1988

## INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Perricone; Nicholas V.	Branford	CT	06450	

US-CL-CURRENT: 424/73; 514/557, 514/574

Full	Title	Citation	Front	Review	Classification	Date	Reference			Claims	KNIC	Draw D
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☐ 12. Document ID: US 4747819 A

L7: Entry 12 of 18

File: USPT

May 31, 1988

US-PAT-NO: 4747819

DOCUMENT-IDENTIFIER: US 4747819 A

**\*\* See image for Certificate of Correction \*\***

TITLE: Iontophoretic drug delivery

DATE-ISSUED: May 31, 1988

## INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Phipps; Joseph B.	Plymouth	MN		
Untereker; Darrel F.	Cedar	MN		

US-CL-CURRENT: 604/20; 604/21, 607/120

Full	Title	Citation	Front	Review	Classification	Date	Reference			Claims	KWC	Draw D
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☐ 13. Document ID: US 4744787 A

L7: Entry 13 of 18

File: USPT

May 17, 1988

US-PAT-NO: 4744787

DOCUMENT-IDENTIFIER: US 4744787 A

**\*\* See image for Certificate of Correction \*\***

TITLE: Iontophoresis apparatus and methods of producing same

DATE-ISSUED: May 17, 1988

## INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Phipps; Joseph B.	Plymouth	MN		
Untereker; Darrel F.	Cedar	MN		

US-CL-CURRENT: 604/20; 607/149

Full	Title	Citation	Front	Review	Classification	Date	Reference			Claims	KWC	Draw D
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☐ 14. Document ID: US 4581148 A

L7: Entry 14 of 18

File: USPT

Apr 8, 1986

US-PAT-NO: 4581148

DOCUMENT-IDENTIFIER: US 4581148 A

TITLE: Depilating composition and method

DATE-ISSUED: April 8, 1986

## INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Swanson; Harley D.	Denver	CO		
McAninch; Terry L.	Westminster	CO		
Conner; J. Keith	Bellevue	WA		

US-CL-CURRENT: 252/8.57; 8/94.16, 8/94.18

Full	Title	Citation	Front	Review	Classification	Date	Reference			Claims	KWC	Draw D
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☐ 15. Document ID: US 4548608 A

L7: Entry 15 of 18

File: USPT

Oct 22, 1985

US-PAT-NO: 4548608

DOCUMENT-IDENTIFIER: US 4548608 A

TITLE: Depilating composition and method

DATE-ISSUED: October 22, 1985

## INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Swanson; Harley D.	Denver	CO		
McAninch; Terry L.	Westminster	CO		
Conner; J. Keith	Bellevue	WA		

US-CL-CURRENT: 8/94.16; 252/8.57, 530/353, 530/356, 530/842, 8/94.18

Full	Title	Citation	Front	Review	Classification	Date	Reference			Claims	KWNC	Draw De
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☐ 16. Document ID: US 4255550 A

L7: Entry 16 of 18

File: USPT

Mar 10, 1981

US-PAT-NO: 4255550

DOCUMENT-IDENTIFIER: US 4255550 A

TITLE: Polyurethane polymers characterized by carboxylate groups and hydroxyl groups in the polymer backbone

DATE-ISSUED: March 10, 1981

## INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Gould; Francis E.	Princeton	NJ		

US-CL-CURRENT: 528/44; 128/849, 528/59, 528/65, 528/71, 528/73, 528/76, 528/80, 528/84

Full	Title	Citation	Front	Review	Classification	Date	Reference			Claims	KWNC	Draw De
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☐ 17. Document ID: US 4156067 A

L7: Entry 17 of 18

File: USPT

May 22, 1979

US-PAT-NO: 4156067

DOCUMENT-IDENTIFIER: US 4156067 A

\*\* See image for Certificate of Correction \*\*

TITLE: Polyurethane polymers characterized by lactone groups and hydroxyl groups in the polymer backbone

DATE-ISSUED: May 22, 1979

## INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Gould; Francis E.	Princeton	NJ		

US-CL-CURRENT: 424/78.06; 128/833, 34/342, 424/422, 424/426, 424/429, 424/444,  
424/445, 424/63, 424/65, 424/667, 424/70.11, 424/76.3, 424/78.25, 528/10, 602/904,  
604/523, 604/544, 8/160

Full	Title	Citation	Front	Review	Classification	Date	Reference			Claims	KBIC	Draw D
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☐ 18. Document ID: US 3665735 A

L7: Entry 18 of 18

File: USPT

May 30, 1972

US-PAT-NO: 3665735

DOCUMENT-IDENTIFIER: US 3665735 A

TITLE: METHOD AND APPARATUS FOR THE BULK PROCESS OF HIDES OR THE LIKE

DATE-ISSUED: May 30, 1972

## INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Brennan; George A.	Fullerton	CA		

US-CL-CURRENT: 69/30

Full	Title	Citation	Front	Review	Classification	Date	Reference			Claims	KBIC	Draw D
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Clear	Generate Collection	Print	Fwd Refs	Bkwd Refs	Generate OACS
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Terms	Documents
dipil\$ same hair	18

Display Format:

[Previous Page](#)

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### Search Results -

Terms	Documents
dipil\$ same hair	18

Database:

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 US Patents Full-Text Database  
 US OCR Full-Text Database  
 EPO Abstracts Database  
 JPO Abstracts Database  
 Derwent World Patents Index  
 IBM Technical Disclosure Bulletins

Search:

L7





### Search History

DATE: Monday, June 06, 2005    [Printable Copy](#)    [Create Case](#)

#### Set Name Query

side by side

*DB=USPT,EPAB,JPAB,DWPI,TDBD; PLUR=YES; OP=OR*

L7    dipil\$ same hair  
L6    dipil\$ same hair same antibiotic  
L5    L4 and (drug or antibiotic)  
L4    (electrolysis or laser) same hair same follicle same remov\$  
L3    (electrolysis or laser) same hair same follicle same drug  
L2    (electrolysis or laser) same hair same follicle same antibiotic  
L1    (electrolysis or laser) same hair same follicle

#### Hit Count Set Name

result set

18    L7  
 0    L6  
 30    L5  
 162    L4  
 14    L3  
 0    L2  
 243    L1

END OF SEARCH HISTORY